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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,681	06/20/2003	Peggy S. Willett	58818US002	6743
32692	7590	05/24/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			MIGGINS, MICHAEL C	
			ART UNIT	PAPER NUMBER

1772

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,681

Applicant(s)

WILLETT ET AL

Examiner

Michael C. Miggins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u>12092004</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/9/2003</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 1-19, drawn to an article, classified in class 428, subclass 76.
- II. Claim 20, drawn to a method of making an article, classified in class 427, subclass 191.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by other methods such as extrusion, lamination or co-extrusion.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Jean Lown on 12/9/2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claim 20 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Examiner's Comments

Claims 1 and 11 contain the limitation "*substantially* free of an additional organic binder material". This limitation has been construed to mean that the composition can contain a low amount of binder.

Claim Rejections - 35 USC § 102

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8. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 7, 9, 11-14, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipate by Matsuo et al. (U.S. Patent No. 5,283,266).

Matsuo et al. disclose an article comprising a substrate having an outer surface, and a water-based adhesive composition on at least a portion of the outer surface of the substrate (column 1, lines 1-20), said adhesive composition comprising epoxy capsules comprising an outer shell material and an encapsulated material surrounded by the outer shell material, said encapsulated material comprising an epoxy resin (column 1, lines 44-51), a polymeric amine that is water soluble or water dispersible (column 1, lines 44-51), said polymeric amine being a binder and an epoxy curative (since a water soluble polyamide is taught as well as Versamid, see column 2, lines 21-38, which is one of the amines disclosed by applicant see page 9 of the instant specification, lines 5-28, and comparative examples 1 and 2 teach no binder at all and example 4 teaches only 2% binder, see Tables 1 and 3 from Matsuo), wherein the adhesive composition is substantially free of an additional organic binder resin (since comparative examples 1 and 2 teach no binder at all and example 4 teaches only 2% binder, see Tables 1 and 3 from) (applies to instant claims 1 and 11).

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Matsuo et al. disclose wherein the outer shell material comprises a urea-formaldehyde-melamine material (column 1, lines 63-68), wherein the epoxy capsules are present in an amount of about 20 to about 60 weight percent and the polymeric amine is present in an amount of about 10 to about 60 weight percent based on the weight of the adhesive composition (column 2, lines 30-43), wherein the polymeric amine comprises a polyamidoamine, a polyethylenimine, a polyoxyalkyleneamines, or a combination thereof (since Versamid, see column 2, lines 21-38, which is one of the amines disclosed by applicant see page 9 of the instant specification, lines 5-28), wherein the substrate is a mechanical fastener, wherein the mechanical fastener comprises a screw, bolt, pipe joint, nut, nail, or a bolt/assembly (column 1, lines 6-41), wherein the adhesive further comprises a thickener (since silica is taught, see tables 1 and 3, which is a thickener described by applicant in the instant specification, page 13, lines 9-18) (applies to instant claims 2, 7, 9, 12-14, 17 and 19).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 3-4 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al. (U.S. Patent No. 5,283,266) in view of Deckert et al. (U.S. Patent No. 3,746,068).

Matsuo et al. disclose applicant's invention substantially as claimed. However, Matsuo et al. fail to disclose wherein the expoxy capsules have a median particle size of about 20 to about 120 micrometers, wherein the epoxy resin comprises a glycidyl ether of polyhydric phenols, said glycidyl ether having at least two epoxy groups per molecule.

Deckert et al. disclose wherein the expoxy capsules have a median particle size of about 20 to about 120 micrometers, wherein the epoxy resin comprises a glycidyl ether of polyhydric phenols, said glycidyl ether having at least two epoxy groups per molecule (column 4, lines 25-59) in an adhesive (column 1, lines 1-10) for the purpose of providing a tack free and non-blocking adhesive (column 1, lines 11-38) (applies to instant claims 3-4).

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided wherein the expoxy capsules have a median particle size of about 20 to about 120 micrometers, wherein the epoxy resin comprises a glycidyl ether of polyhydric phenols, said glycidyl ether having at least two epoxy groups per molecule in the adhesive of Matsuo et al. in order to provide a tack free and non-blocking adhesive as taught or suggested by Deckert et al..

The combined teachings of Matsuo et al. and Deckert et al. disclose the claimed invention except for the breakaway torque recited in claims 15-16.

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However, Deckert et al. teach good breakaway torque using an epoxy adhesive (see table 1). Thus one of ordinary skill in the art would have recognized that the breakaway torque would be readily determined through routine experimentation depending on the desired end results absent some showing of unexpected results. Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the breakaway torque recited in claims 15-16 in order to prevent a screw or bolt from dropping out of place, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges or an optimum value of a result effective variable involves only routine skill in the art (applies to instant claims 15-16). *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

12. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al. (U.S. Patent No. 5,283,266) in view of Deckert et al. (U.S. Patent No. 3,746,068), as applied to claims 3-4 and 15-16 above, and further in view of Hilbelink et al. (U.S. Patent No. 3,657,379).

Matsuo et al. disclose applicant's invention substantially as claimed. However, Matsuo et al. fail to disclose wherein the epoxy resin comprises a diglycidyl ether of Bisphenol A and wherein the encapsulated material further comprises an epoxy diluent.

Hilbelink et al. disclose wherein the epoxy resin comprises a diglycidyl ether of Bisphenol A and wherein the encapsulated material further comprises an

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epoxy diluent (column 6, lines 20-52) (applies to instant claims 5-6) in an epoxy capsule adhesive system (column 5, line 67 through column 6, line 52) for the purpose of providing an adhesive for use at low or high temperatures (column 3, lines 15-29).

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided wherein the epoxy resin comprises a diglycidyl ether of Bisphenol A and wherein the encapsulated material further comprises an epoxy diluent in the adhesive of Matsuo et al. in order to provide an adhesive for use at low or high temperatures as taught or suggested by Hilbelink et al..

13. Claims 8, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al. (U.S. Patent No. 5,283,266) in view of Hilbelink et al. (U.S. Patent No. 3,657,379).

Matsuo et al. disclose applicant's invention substantially as claimed. However, Matsuo et al. fail to disclose the adhesive further comprising an inorganic or polymeric filler.

Hilbelink et al. disclose the adhesive further comprising an inorganic or polymeric filler (column 10, lines 64-75 and column 11, lines 1-50) in order to reduce costs (applies to instant claims 8 and 18).

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided the adhesive further

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comprising an inorganic or polymeric filler in the adhesive of Matsuo et al. in order to reduce costs as taught or suggested by Hilbelink et al..

With regard to claim 10, Matsuo et al. disclose a one part adhesive system. However, Hilbelink illustrates that it is well known to provide a capsule adhesive system in two parts (column 3, lines 30-44) in order to prevent the adhesive from curing prematurely. Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided wherein the adhesive composition comprises a first part and a second part, wherein the first part comprise the epoxy capsules and the second part comprises the polymeric amine in order to prevent the adhesive from curing prematurely (applies to instant claim 10).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Miggins whose telephone number is (571) 272-1494. The examiner can normally be reached on Monday-Friday; 1:30-10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pyon Harold can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MCM
December 9, 2004

Michael C. Miggins
Examiner
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